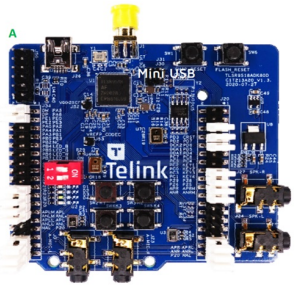


# TELINK TLSR9518A Generic Starter Kit User Guide



**Telink Semiconductor**
**TLSR9518A Generic Starter Kit Hardware Guide**

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## General description

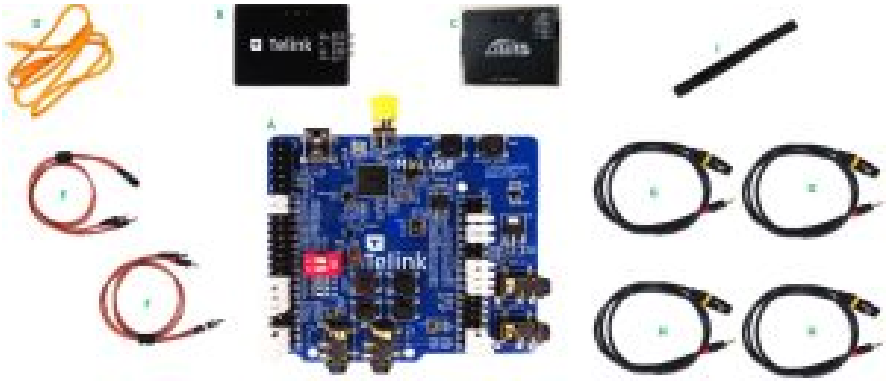
- The guide introduces how to get started with the Kit.TLSR9518A Generic Starter Kit is a hardware platform that can be used to verify the TLSR9x series chipset and develop a 2.4G protocol application.

## Material list

The ordering name of the TLSR9518A Generic Starter Kit is TLSR9518ADK80D-KIT. The main materials in the kit are listed here.

- 1x TLSR9518ADK80D -A
- 1x TLSR9 DEV KEY, including DuPont wires -B
- 1x Telink Burning Board, including DuPont wires -C
- 1x USB cable -D

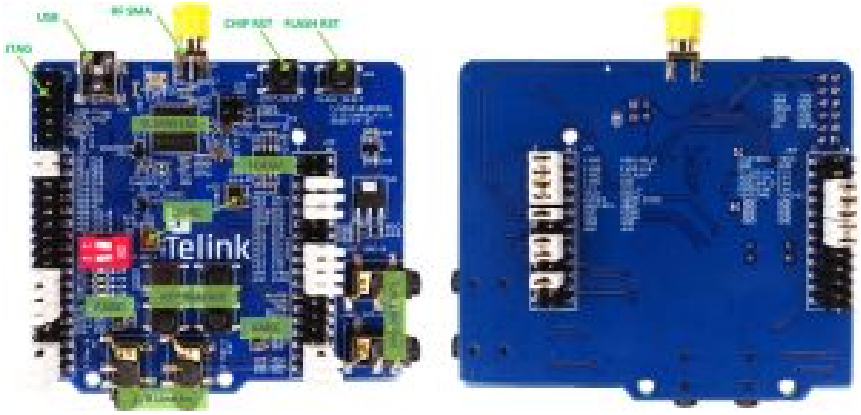
- 1x audio cable, 3.5mm female jack to 2 male 3.5mm audio plug -E
- 1x audio cable, 3.5mm male plug to 2 male 3.5mm audio plug -F
- 2x audio cable, 3.5mm audio plug to Canon plug -G
- 2x audio cable, 3.5mm audio plug to Canon jack -H
- 1x Whip Antenna -I



### Overview

The diagram below illustrates the main components and default jumper setting on TLSR9518ADK80D when the user gets it. It supports functions listed herein default setting.

- RF conducted test
- External Flash with reset button
- Chip reset button
- Mini USB interface
- 2-wire JTAG, default.
- 4 led, Key matrix up to 4 keys
- 2 line-in function (Dual Analog microphone supported when switching jumper from microphone path)
- Dual Digital microphone
- Stereo line-out



**Power connection method with Telink Burning Board**

TLSR9518A supports an easy debug method. Only three wires are needed.

- 5V from Telink Burning Board is connected to VBUS from TLSR9518ADK80D.

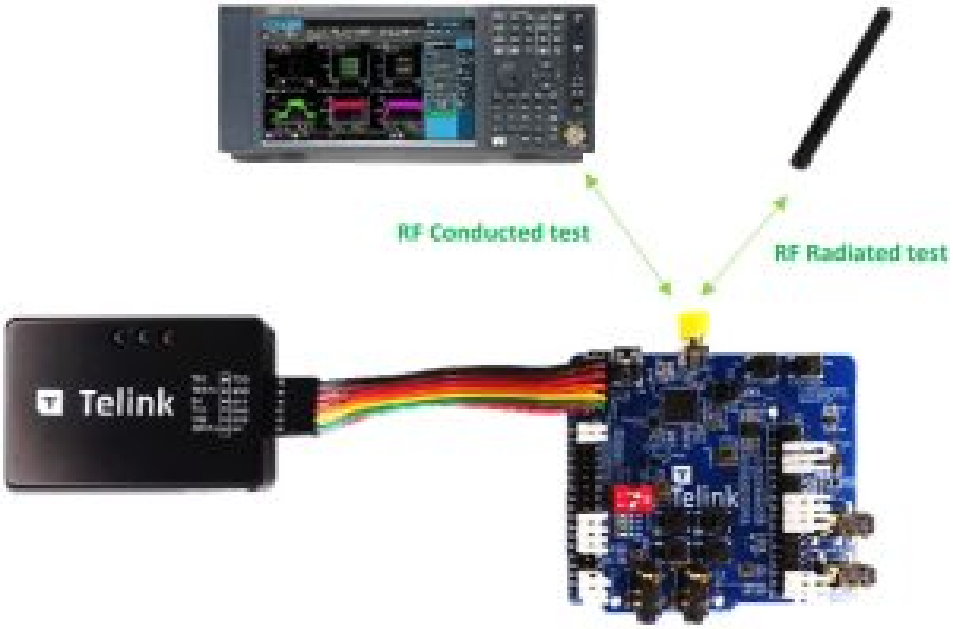
- SWM from Telink Burning Board is connected to SWS from TLSR9518ADK80D.
- GND from Telink Burning Board is connected to GND from TLSR9518ADK80D.


**Power connection method with TLSR9 DEV KEY**

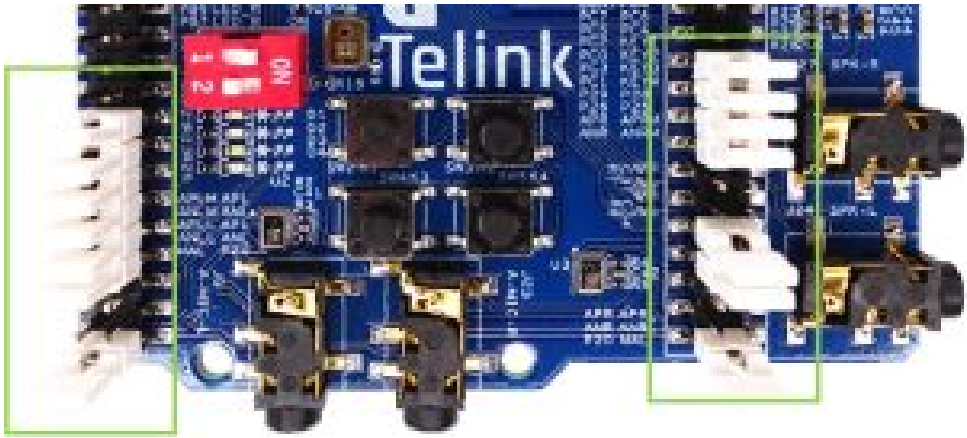
- A RISC-V core is embedded in TLSR9518A, so TLSR9518A supports JTAG debug.
- The 2×6 connector on the left of the mini USB interface is the JTAG interface. In the beginning, the user connects TLSR9 DEV KEY to the JTAG interface using DuPont wires one by one. Then, the user can use the Telink IDE tool to download FW. Right now, please check if the DIP button is under the right setting. It supports a 2-wire JTAG interface when the “1” button is on, “2”
  the button is off. On the other side, it supports a 4-wire JTAG interface when the “1” button is off, “2” button is on.
- There is a 5V LDO on TLSR9 DEV KEY, so if connecting TLSR9 DEV KEY with TLSR9518ADK80D through DuPont wires, it is not necessary to plug-in USB cable. Only when using USB function, user need to plug in a USB cable.


**RF test**

Power on firstly, then connect RF SMA through a cable to equipment or through whip antenna when verifying chipset or develop the function. The corresponding tool is the EMI tool which can be gotten from the wiki.




**Dual analog microphone function**
Dual analog microphone function is enabled when following the jumper setting as below.

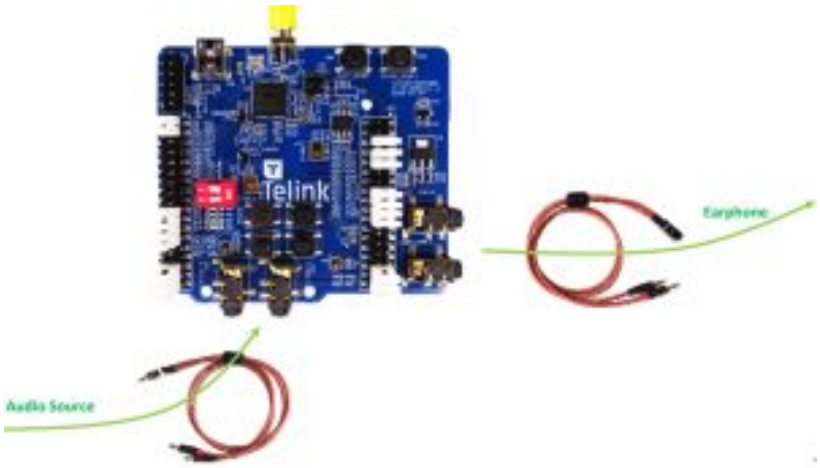



**Audio input path test**

- The dual analog microphone function is enabled under the default setting. When testing the audio input path, please change the jumper setting as below, the others which are not shown are kept in their original position. Some audio analyzers can be used for testing, such as APx525.


- All jumpers are kept in the default setting, and the connection of the audio output path is as below. Some audio analyzers can be used for testing, such as APx525.


**Audio input/output path demo**
Sometimes, the user wants to listen to music directly in the development stage. Then, the connection is as below.




**GPIO test**

All of the GPIOs of TLSR9518A have been connected to PINs. Then the user can ready the corresponding schematic and test all
GPIOs.

## FCC Statement

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: 1) this device may not cause harmful interference, and 2) this device must accept any interference received, including interference that may cause undesired operation.
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
– Reorient the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.
Changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.
The distance between user and products should be no less than 20cm

## Documents / Resources

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|---|---|
|  | **TELINK TLSR9518A Generic Starter Kit** [pdf] User Guide<br>TLSR9518A, Generic Starter Kit |